Reliability and Security Of Mail Systems
Scalability, Redundancy, Resilience, Recovery, Security

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Part I

Mail System Reliability And Scalability

Part 1: Mail System Reliability And Scalability

1. Reliability Considerations (No Noticable Impact)

2. Reliability Considerations (Minor Noticable Impact)
   - Mx Records Redundancy

Reliability Considerations (No Noticable Impact)

What Can Fail Without Any Noticable Impact

- Redundant Mail Servers
- Redundant Mail Access Servers
- Redundant DNS Servers

Reliability Considerations (Minor Noticable Impact)

- Mail Box Storage

Mx Records Redundancy

Internet Mail System Is Designed To Take Hits.
Hits Should Have Minimal Impact.

Part II

Scalability, Distribution And Recovery

3. By* 's Model Of Distribution Of Domains

Segmenting the roots of your mail domain lets you fundamentally divide the user base.

Part III

Class Activities

Part 3: Class Activities

4. Accessing Your Accounts On ByStar Mail Server
   - Your Domains, Your Account+Passwd
   - ByStar Mail Server Basic Tests

5. Bash Scripting – MailBot and MailInjector Exercises
   - mailInjector.sh Evolution
   - mailBot.sh Evolution
   - Offlineimap + notmuch

Your Domains, Your Account+Passwd

- smtp.first.1.last.byname.net – imap.first.1.last.byname.net
- Your account is the first field in the /etc/passwd file that was emailed
- Your passwd was emailed to you

ByStar Mail Server Basic Tests

- ping smtp.first.1.last.byname.net
- From Your Bellevue College Account Send Messages To main@first.1.last.byname.net
- Submit Server Tests Against smtp.first.1.last.byname.net

Accessing Your Accounts On ByStar Mail Server
Bash Scripting -- MailBot and MailInjector Exercises

mailInjector.sh Evolution
mailBot.sh Evolution
Offlineimap + notmuch

mailInjector.sh Evolution

- cd ~/isit442
- mv mailInjector mailInjector.20160223
- cp -r -p /opt/public/osmt/bin/mailInjector .

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Offlineimap + notmuch

mailBot.sh Evolution

- Top-Down Design, Bottom-Up Implementation
- Managing Complexity, Cohision, Consistency – mailInjector.sh
- Panel.org Omni-Available Features
- Iim Omni-Available Features
- Bashing – Procedural vs Functional Vs Object-Oriented

Accessing Your Accounts On ByStar Mail Server
Bash Scripting – MailBot and MailInjector Exercises

mailInjector.sh Evolution
mailBot.sh Evolution
Offlineimap + notmuch

Offlineimap + notmuch

- Hit Your ByStar Imap Account With offlineimpa
- run notmuch on your locally synched messages

Part IV

Assignments

Part 4: Assignments

- Work On Your Own Full Mail Processing Loop:
  - Use mailInjector.sh to send out a pdf attchamnet to your ByStar account.
  - Use offlineimap to automatically retrieve that message.
  - Use mailBot.sh to disect the pdf message into its original pdf file.
  - Print out a command that would have printed that pdf file.
  - Make it such that all of the above can be automated repeatedly.

Write a high level description of steps involved in:

- Transitioning From One Mail System To Another
  - Assume User Base of 500. 1000 Mailboxes.
  - 6 hour Window to implement the transition.
  - Old and New DNS is under your control. What will you do to old and new.
- Transitioning From On-Site Mail System To A Cloud Base Service

For each step specify details.